

Information Technology

Background

Public schools have made major investments in the installation and operation of information technology systems over the last decade. Estimates for expenditures in educational technology approach \$5 billion per year in public schools. These expenditures include installation of technology infrastructure, purchase of hardware and software, employment of instructional technology and technology support staff and provision of professional development for teachers and technology-related staff.

Funding for technology expenditures is derived from several sources, including local, state, and federal government programs (as well as public-private partnerships) including:

- Many school districts utilize local funding for technology initiatives. Increasingly, public school bond packages include major district-wide technology initiatives.
- Many states provide funding for technology utilization in the classroom, as well as installation of infrastructure.
- Significant federal funding is available for installing and utilizing technology in an educational setting, including the Technology Innovative Challenge Grants and Title I, II, VI, and VII funds, which allow funds to be used for technology-related initiatives. School districts may also apply for funding from the Universal Service Fund Education-Rate (E-Rate) program for installing telecommunications infrastructure.
- Many LEAs have capitalized on public-private partnerships to provide significant levels of technology infrastructure and support, including donated hardware and software.

The increased focus on instructional technology has led to increased scrutiny of technology expenditures. In particular, education providers are challenged to demonstrate the cost-effectiveness of technology utilization compared to traditional methods of instruction. In order to address these questions, it is important for state and local education agencies to capture and report information on the type and level of technology expenditures.

Given the diversity and breadth of information technology-related expenditures, several challenges exist related to planning and tracking them, including:

- Capturing all costs associated with technology installation and utilization, including direct costs (e.g., hardware and software) and indirect costs (e.g., professional development, network support)
- Distinguishing between expenditures for instructional technology and administrative technology (such as financial systems and student information systems)
- Planning, budgeting and capturing expenditures appropriately for capital versus operating expenditures

- Determining the appropriate capitalization thresholds for technology-related expenditures
- Accounting for shared-service arrangements for technology, including telecommunications infrastructure and services

Accounting Treatment

The Handbook addresses technology in a variety of areas. However, the treatment of technology is fragmented and does not reflect the important role technology plays in public education since the last Handbook publication. In order to increase the focus on technology, the account code structure could be revised in one of the following manners:

- Option 1: Develop and implement a new program code to track all LEA technology initiatives in a single account. This new program code could either aggregate all technology expenditures or utilize multiple program codes to distinguish between instructional technology and administrative technology expenditures. Although this option has merit (aggregation of technology expenditures), technology does not clearly fit within the typical definition of a program, nor does it appear to correspond with other programs included in the current account code structure.
- Option 2: Revise function codes to more clearly define technology expenditures to be included within each function code, including contemporizing the language utilized to define the codes and adding new function codes, where necessary.

Proposed Handbook Revision

We propose the implementation of Option 2, revision and addition of function codes. Although this option does not allow for the aggregation of technology-related expenditures within a single code, it will have several benefits including:

- Categorization of administrative and instructional technology costs
- Inclusion of technology-related costs within the existing educational program structure (e.g., general education, special education, etc.)
- Ability to address the conflicting needs to track technology costs on a case by case basis (based on the individual merits in each case) rather than developing a single solution

Information technology currently is addressed within the Handbook in the following function codes:

2225. Computer-Assisted Instruction Services.

“Activities concerned with planning, programming, writing, and presenting educational projects which have been especially programmed for a computer to be used as the principal medium of instruction.”

2840. Data Processing Services.

“Activities concerned with preparing data for storage, storing data, and retrieving them for reproduction as information for management and reporting.

- 2841. Supervising Data Processing Services.** Activities concerned with directing, managing and supervising data processing services.
- 2842. Systems Analysis Services.** Activities concerned with searching for and evaluating alternatives for achieving defined objectives, based on judgment and, wherever possible, on quantitative methods. Where applicable, these activities pertain to the development of data processing procedures or application to electronic data processing equipment.
- 2843. Programming Services.** Activities concerned with the preparation of a logical sequence of operations to be performed, either manually or electronically, in solving problems or processing data. These activities also involve preparing coded instructions and data for such sequences.
- 2844. Operations Services.** Activities concerned with scheduling, maintaining, and producing data. These activities include operating business machines, data preparation devices, and data processing machines.
- 2849. Other Data Processing Services.** Activities concerned with data processing not described above.”

In order to contemporize these function codes and their descriptions, we propose the following revisions:

2225. Instructional Technology Services.

“Activities concerned with the development, purchase, implementation and use of information technology designed to enhance educational service delivery in instructional settings. This function includes the purchase of hardware, software, professional services and related support personnel costs directly attributable to the utilization of technology for instructional purposes utilizing operating funds. These costs include funds typically expended at the campus level for technology provisioning in classrooms and labs.

Expenditures for inclusion within this function include those related to the procurement of items such as computers, servers, printers, peripherals and related devices that are non-capital in nature. Personnel to be included in this function include instructional network support personnel, instructional technology coordinators and other personnel that are dedicated to supporting the instructional technology environment. Telecommunications charges and fees, as well as Internet access fees, that are directly attributable to the instructional environment may also be included in this function. In addition, professional development costs associated with these personnel would be appropriately coded to this

function. Technology-related professional development costs associated with instructional or administrative personnel should be coded to the appropriate function code for those personnel (e.g., Instruction – 1000 for instructional personnel development costs).”

2840. Administrative Technology Services.

“Activities concerned with supporting the LEA’s information technology systems, including supporting administrative networks, maintaining administrative information systems, and processing data for administrative and managerial purposes. These activities may include expenditures for internal technology support, as well as support provided by external vendors utilizing operating funds.

- 2841. Technology Services Supervision and Administration.** Activities concerned with directing, managing and supervising technology support services.
- 2842. Systems Analysis and Planning Services.** Activities concerned with searching for and evaluating alternatives for achieving defined objectives, based on judgment and, wherever possible, on quantitative methods. These activities generally pertain to the development of LEA information technology systems operations plans and needs assessments.
- 2843. Systems Application Development Services.** Activities concerned with the development of new systems applications to serve the LEA’s administrative technology support needs. These activities also involve preparing coded instructions and data for new programs, as well as testing new applications.
- 2844. Systems Operations Services.** Activities concerned with the maintenance and operation of existing information technology systems. This includes scheduling, maintaining, and producing data utilizing information technology systems. These activities relate to the operation of the systems themselves, rather than the use of data by the operator or end-user.
- 2845. Network Support Services.** Activities concerned with the maintenance and operation of administrative network systems. This includes the development, implementation and operation of information technology networks that support to provide administrative functions. Telecommunications charges and fees, as well as Internet access fees, that are associated with the administrative environment may also be included in this function.
- 2846. Hardware Maintenance and Support Services.** Activities concerned with purchasing, maintaining and servicing technology infrastructure and devices. This includes PC support, troubleshooting and maintenance.

2847. Technology Professional Development (Administrative). Activities concerned with the professional development and training of administrative technology personnel. Technology-related training for other administrative personnel should be coded to the appropriate function code (e.g., technology-related training for operations and maintenance personnel should be coded to the appropriate code within the 2600 function code series).

2849. Other Technology Support Services. Activities concerned with administrative technology support not described above.”

In addition, to improve the tracking of expenditures for the installation of technology hardware as part of capital initiatives, we recommend development of a new function code as follows:

4700. Technology Infrastructure Development Services. Activities concerned with the development and installation of technology infrastructure (hardware) in existing and new facilities, utilizing capital funds. This includes such items as cabling, administrative and instructional networks, hubs, routers, PCs, peripherals and other information technology items of a capital nature.

The adoption of these changes to the Handbook will enhance significantly an LEA’s ability to track and report on information technology costs. These revisions address the majority of the concerns that have been identified by local and state educational personnel including:

- The use of the revised function codes will aggregate technology-related expenditures in three areas: instructional (**2225**), administrative (**2800** series) and capital (**4700**)
- The use of the revised functions codes maintains the distinction between instructional and administrative expenditures
- The use of the revised functions codes maintains the distinction between operating and capital expenditures

The proposed revisions do not address the need for further definition of capitalization thresholds for technology-related expenditures. This issue appears to be more appropriately addressed at the local or state level, with consideration for relevant federal program guidelines.

Coding Examples

1. Within a fiscal year, an LEA purchases, installs, and begins to utilize a new student information management system.

The purchase and installation of the system software should be coded as function 2843, Systems Application Development Services. Once the system has been installed and is utilized by the LEA, maintenance of the system should be coded

to function 2844, Systems Operations Services. Expenditures related to the use of the system, including data-input and report development by users, should be coded to function 2822, Internal Information Services.

2. An LEA includes a technology enhancement initiative in a bond package approved by voters. As part of this initiative, the LEA purchases 1000 personal computers for new computer labs.

Expenditures for these computers, as well as the cabling required to connect them to a local area network, should be coded to function 4700, Technology Infrastructure Development Services.

3. An LEA purchases 25 personal computers using operating funds to replace those currently used in the Central Administrative Office.

These expenditures should be coded to function 2846, Hardware Maintenance and Support Services.

4. An LEA constructs a new high school campus for a total cost of \$65 million. Of the total cost \$55 million is associated with the physical construction of the facility, \$5 million for furniture and fixtures and \$5 million for information technology infrastructure (e.g., cabling, routers, hubs, network equipment, etc.)

The LEA should code the expenditures as follows:

- \$55 million should be coded to function code 4500 (Building Acquisition and Construction Services) utilizing object code 720 (Buildings)
- \$5 million should be coded to function code 4500 (Buildings Acquisition and Construction Services) utilizing object code 733 (Furniture and Fixtures)
- \$5 million should be coded to function code 4700 (Technology Infrastructure Development Services) utilizing object code 739 (Other Equipment)

All costs should be accounted for in a designated Capital Projects Fund.